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ABSTRACT

An instrument to measure differences in values and attitudes between teachers possessing differing degrees of innovativeness was developed. Factor analysis of responses to the Curriculum Accomodation Questionnaire revealed 13 factors. Predictive statistical analysis revealed associations between a concurrent measure of teacher innovativeness and eight of the factors. The factors labeled Educational Conservatism, Curriculum Defined by Society, Teacher Distrust of Authority, and Rigidity Toward Change were negatively associated with teacher innovativeness. The factors labeled Permissiveness, Equality of Educational Opportunity, Academic Elitism, and Law and Order were positively associated with teacher innovativeness. The other factors identified were Educational Conservatism, Moral Flexibility, Puritanism, Rugged Individualism, and Bigotry. A review of the literature is provided. (Author/BB)

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VALIDATION OF THE CURRICULUM ACCOMODATION QUESTIONNAIRE

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It has been asserted that "The average American school lags twenty-five years behind the best practice" (Mort, 1953, pp. 199-200). More recent studies have indicated that the time lag for the acceptance of certain innovations is much shorter (Carlson, 1965). Nevertheless, widespread acceptance of new ideas is slower than in the agricultural and medical fields (Rogers and Shoemaker, 1970, p. 59). Yet, the demand upon the American educational establishment for change has seldom been greater.

Research regarding the diffusion of innovations in a number of social science disciplines was reviewed by Rogers and Shoemaker (1970). The basic generalizations found in this review regarding the personal traits of early versus later adopters are shown in Appendix A. Of the 1,084 studies reviewed only seventy-one came from educational research. This review showed that sociological and personality traits and their relationships to innovativeness have been the focus of these studies.

This author reviewed the educational research literature for studies concerning relationships between personal traits and teacher innovativeness. A summary of this review is shown in Appendices B and C. This review revealed that most of the personal traits studies were either demographic or personality traits.

It is the position of this author that the research regarding communication channels and the diffusion of innovations has practical

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implications for educational change agents and teacher training institutions. But most of the research regarding personality, sociological, and demographic traits has limited value except in the area of personnel selection and the screening of candidates for entry into the teaching profession. For those interested in the training of teachers and with interacting with teachers to help them become more innovative research concerned with educationally related beliefs and values seems to hold more promise.

In view of this argument and the existing literature, the author created the Curriculum Accomodation Questionnaire (CAQ). Responses to the CAQ, a pencil and paper self-report instrument, were used to predict, for an individual teacher, the frequency of nomination by his peers as innovative. The items of the CAQ were selected and written with reference to ten propositions designed to detect attitudes and values that influence teacher innovativeness. These propositions were:

1. Curriculum and society.--The more-innovative teacher feels that the curriculum should reflect and draw upon the community in which his students live.

2. Dynamic job situation.--The more-innovative teacher tends to prefer dynamic work situations.

3. Sense of responsibility to groups.--The more-innovative teacher feels a greater sense of responsibility to instructional planning groups.

4. Philosophy.--The more-innovative teacher holds a more pragmatic position.

5. Importance of subject matter.--The more-innovative teacher feels that subject matter is less important as a basis for organizing the curriculum.

6. Control of student behavior.--The more-innovative teacher feels that tight control of student behavior is less important.

7. Impunity from criticism.--The more-innovative teacher assumes greater responsibility for failures in his classroom.

8. Moral relativism.--The more-innovative teacher tends to view morality as situational and believes that moral learning involves conscious choice-making.

9. Student activity orientation.--The more-innovative teacher believes that students should interact socially and investigate their immediate environment.

10. Basis for judging children.--The more-innovative teacher tends to make judgments concerning students more on an individual basis; the less-innovative teacher tends to make judgments concerning students more on a group-membership basis.

Method

Items for the CAQ were selected from questionnaires reported by Edwards (1966), Duncan (1954) and Trumbo (1961). After many of the items were rewritten they were given a six-point Likert-type response scale. This 111 item questionnaire was administered to 187 educators.

Zimmerman's (1971b) Teacher Selection Form formed the basis of the method used for measuring individual teacher innovativeness. A fourth question was added to the questionnaire and the original questions were altered to allow the nomination of three teachers per question. This revised questionnaire, the Teacher Designation Form (TDF), which is shown in Appendix D was concurrently administered with the CAQ to twenty-five teachers from an elementary school (grades K-4) and to twenty-three teachers from a postelementary school (grades 5-8).

All 111 items of the CAQ were crosscorrelated using the responses of the 187-subject sample. This produced a 111-by-111 intercorrelation matrix. The size of this matrix was reduced to 96-by-96 when sixteen items were eliminated because their distributions of intercorrelations resembled the theoretical normal distribution resulting from the intercorrelation of data from random samples.

The resulting matrix was then factor analyzed using computer program ED502 which gave orthogonal solutions rotated to the Varimax criterion (Guertin and Bailey, 1970, pp. 122-124, 296-302). The resulting orthogonal solutions were then inspected and a best solution was chosen. The number of factors in this solution determined the number

of factors to rotate to an oblique simple-loadings solution using computer program ED512 (Guertin and Bailey, 1970, pp. 372-379). If there was close agreement between the orthogonal and oblique solutions the orthogonal solution was used for the creation of factor scores using computer program ED518 (Guertin and Bailey, 1970, pp. 310-311).

The set of factor scores for each factor within each school was then curvilinearly correlated with the corresponding set of teacher-innovativeness scores using computer program BMD05R (Dixon, 1971, pp. 289-296). Only those independent variables that were linearly related to the dependent variable were entered into calculations for stepwise linear regression using computer program BMD02R (Dixon, 1971, pp. 233-257). This analysis was designed to identify attitudes that were significant predictors of teacher innovativeness.

The ability of the attitude measures contained in the CAQ to predict teacher membership in groups drawn from opposite ends of the innovativeness continuum across schools was tested. The 25 percent of the population which received the greatest proportional fraction of possible nominations constituted the more innovative group, and the 25 percent of the population which received the smallest proportional fraction constituted the less innovative group. Stepwise discriminant analysis was performed using computer program BMD07M (Dixon, 1971, pp. 214a-214t).

Since the postelementary school had greater exposure to external change agents and was considered somewhat more innovative than the elementary school, the ability of CAQ attitude scores to classify teachers correctly according to faculty membership was tested using stepwise discriminant analysis.

Analysis

Both orthogonal- and oblique-factor analysis of responses to

CAQ items by 187 educators revealed thirteen rather independent factors. The communalities for the ninety-six CAQ items that underwent factor analysis indicated that all but twenty of the items had communalities greater than 0.70, which was indicative of adequate reliabilities for most of the items (Guertin and Bailey, 1970, p. 215).

The thirteen-factor orthogonal solution for the CAQ accounted for 42.56 percent of the total variance and for 55.52 percent of the common variance. This showed that much of the variance in relationships between items was not accounted for by this factor-analysis solution. With this much random variance in the intercorrelation matrix for CAQ items, it seems quite likely that the general factor structure shown for this sample of educators might be altered if responses to the CAQ were to be factor analyzed for another sample.

All CAQ items with loadings on a given factor equal to or greater than 0.30 in absolute value were grouped together and a label having face validity was assigned to each factor. Table 1 summarized the results of factor labeling.

TABLE 1
FACTOR LABELS FOR THE THIRTEEN-FACTOR ORTHOGONAL SOLUTION

Factor Number	Factor Label	Number of Items Used for Interpretation
1	Educational Conservativism (EdCons)	13
2	Educational Progressivism (EdProg)	11
3	Moral Flexibility (MFlex)	11
4	Permissiveness (Pms)	9
5	Puritanism (Pur)	15
6	Rugged Individualism (RgInd)	8
7	Bigotry (Bgt)	9
8	Curriculum Defined by Society (CurSoc)	10
9	Teacher Distrust of Authority (TDsAut)	4
10	Equality of Educational Opportunity (EqEd)	8
11	Rigidity Toward Change (RdCh)	10
12	Academic Elitism (AcEt)	4
13	Law and Order (LwOr)	4

The TDF was administered concurrently with the CAQ to forty-eight teachers from an elementary and a postelementary school. The validity of summing the frequency of nomination across items of the TDF to create a total frequency of nomination for each teacher was validated by intercorrelating between items of the TDF and the total frequency of nomination of the TDF. Table 2 shows the resulting intercorration matrix and reveals that correlations between the frequency of nomination ranges between 0.84 and 0.95. These high correlations indicated that the four TDF items were all asking essentially the same question.

TABLE 2
INTERCORRELATION MATRIX FOR THE FOUR ITEMS
AND TOTAL SCORE OF THE TDF
n = 48

Item Number	1	2	3	4	Total
1	1.00	0.64	0.89	0.71	0.91
2		1.00	0.75	0.62	0.84
3			1.00	0.73	0.95
4				1.00	0.86
Total					1.00

CAQ-factor scores based upon the thirteen-factor orthogonal solution were created for the forty-eight teachers who responded to the TDF, and the frequency of nomination for each teacher on the TDF was normalized by rank ordering teachers according to their frequency of nomination and assigning Z-scores to their ranks. CAQ-factor scores became independent variables, and transformed TDF scores became the dependent variable for subsequent regression analysis. For discriminant analysis, CAQ factors were used as independent variables, and TDF scores and school faculty membership were used to establish criterion group membership. Table 3 summarizes the statistically significant relationships between CAQ-

factor score variables and an indicator of teacher innovativeness. Tables summarizing each of the indicated analyses are provided in Appendix E.

For the elementary school faculty Factor 10 was the only statistically significant predictor of teacher innovativeness. Teachers who expressed greater endorsement of equality of educational opportunity for all children tended to be more innovative.

For the postelementary school faculty Factors 1 and 4 were both included in a statistically significant regression model to predict teacher innovativeness. Teachers expressing greater educational conservativism tended to be less innovative, and teachers expressing greater permissiveness concerning children tended to be more innovative.

Since the postelementary school was considered somewhat more innovative than the elementary school, stepwise discriminant analysis was performed in an effort to predict faculty membership of teachers given their CAQ-factor scores. The four-variable discriminant function was accepted as the best solution. Factors 4, 8, 11, and 12 were the predictor variables in the model. Factors 4 and 12 were positively related to membership in the more innovative school faculty, and Factors 8 and 11 were negatively related to membership in the more innovative school faculty. This discriminant function predicted teacher membership in the respective faculties with 75 percent accuracy.

Table 3 shows a summary of relationships between CAQ-factor variables and teacher innovativeness revealed by discriminant analysis of the twelve most- and twelve least-innovative teachers in the two schools. This discriminant analysis, performed across school populations, showed that Factors 1, 9, and 11 were all negatively related to teacher innovativeness. This same analysis showed that Factors 4 and 13 were both positively related to teacher innovativeness. The dis-

TABLE 3

SUMMARY OF ANALYSIS INVOLVING CAQ-FACTOR SCORES AS DEPENDENT VARIABLES*

Factors	Elementary Faculty Regression Analysis	Postelementary Faculty Regression Analysis	High-Low Discriminant Analysis	Elementary-Postelementary Discriminant Analysis
1 EdCons		-	-	
2 EdProg				
3 MFlex				
4 Pms		+	+	+
5 Pur				
6 RgInd				
7 Bgt				
8 CurSoc				-
9 TDsAut			-	
10 EqEd	-			
11 RdCh			-	-
12 AcEt				+
13 LwOr			+	

*+ indicates statistically significant positive relationship between factor and innovativeness ($\alpha \leq 0.05$); - indicates statistically significant negative relationship between factor and innovativeness ($\alpha \leq 0.05$).

criminant function that resulted from the use of these five variables resulted in the correct classification of nineteen of twenty-four teachers.

Conclusions

In general, CAQ-factor variables were better at revealing attitudes and values that were negatively associated with teacher innovativeness than revealing attitudes and values that were positively associated with innovativeness.

For the most part, the significant associations between CAQ factors and teacher innovativeness seemed reasonable. Factor 4 was shown in Table 3 to be positively associated with teacher innovativeness in three of the four predictive analyses. This seemed to be a reasonable association, because teachers not overly concerned with maintaining tight control of student behavior should feel freer to engage in innovative practices even when this might involve more student noise, movement, and independence.

Factor 1 was strongly associated in the negative sense for two of the four predictive analyses. Since this factor involved endorsement of academic and abstract learning, and very traditional approaches to curriculum change, it seemed very reasonable that this combination of values and attitudes should be negatively related to innovativeness.

The two discriminant analyses showed that Factor 11 was negatively associated with teacher innovativeness. This factor was the easiest to label, and high factor scores involved endorsement of routinized job situations. Since innovation usually involves the alteration of routine, this negative relationship seemed quite logical.

Factor 8 was negatively associated with teacher innovativeness in one discriminant function. This negative relationship seemed logical, since high scores for the factor represented endorsement of rigid ad-

nerence to long-range plans, use of textbooks, and bringing the student into conformity with social norms.

One discriminant function revealed a negative association between teacher innovativeness and factor 7. This relationship seemed logical when one considers that distrust of school administrators tends to cut the teacher off from a possible source of information concerning innovations.

For one school setting, regression analysis revealed a positive association between teacher innovativeness and factor 11. This relationship seemed reasonable in that much innovation seems to be currently stimulated by a desire to individualize instruction in an effort to better serve both brighter and slower students.

Discriminant analysis revealed positive associations between teacher innovativeness and Factors 12 and 13. These findings seemed to contradict the positive relationships between teacher innovativeness and Factors 4 and 10. It must be remembered that these are orthogonal factors, mathematically independent of each other, so it was possible to endorse both permissiveness and order and law positions at the same time, even though this seemed logically contradictory. The same was true for Factors 10 and 12. However, it should be noted that some innovators may be motivated to innovative practices by a desire to better educate the more capable students.

The items that were shown to be loaded on the factors that were statistically associated with teacher innovativeness may be combined into a single questionnaire. This resulting questionnaire is shown in Appendix F. This questionnaire was labeled the Curriculum Accommodation Questionnaire (CAQ), Form B. This questionnaire was made up of items with loadings equal to or greater than 0.30 in absolute value from Factors 1, 4, 8, 9, 10, 11, 12, and 13.

The ten basic propositions used as a basis for item selection for the CAQ were only partially confirmed by the factors obtained from the thirteen-factor orthogonal solution and their association with innovativeness. Proposition 1 conceptually corresponded in the negative sense to Factor 6 and was negatively related to teacher innovativeness. Therefore, Proposition 1 was supported.

Proposition 2 corresponded in the negative sense to Factor 11. Since Factor 11 was negatively related to teacher innovativeness, Proposition 2 was supported.

Factor 1 contained many items that were conceptually related to Proposition 5. Proposition 5 was supported in that Factor 1 was negatively related to teacher innovativeness.

Proposition 6 was conceptually related to Factor 4 and was positively associated with teacher innovativeness, thus supported the relationship between Proposition 6 and teacher innovativeness.

Factors 4 and 10 were conceptually associated with Proposition 10. As predicted, Factors 4 and 10 were positively associated with teacher innovativeness which supported Proposition 10.

Factor 2 was conceptually associated with Proposition 9. Factor 3 was logically related to Proposition 8. Predictive analyses showed no statistically significant relationships between Factors 2 and 3 and teacher innovativeness. In light of these nonsignificant associations, Propositions 8 and 9 were not supported.

Propositions 3, 4, and 7 were not related to any of the empirical factors resulting from factor analysis. Therefore, they were not tested.

Recommendations for Further Research

The investigator's recommendations for further research include,

1. Creation of another questionnaire to better measure with reference to Propositions 3, 4, and 7, so the validity of

these propositions may be tested.

2. Administration of the CAQ, Form S, to a larger population of teachers to better determine its factor structure.

3. Administration of the CAQ, Form S, twice to the same population with instructions to respond as an innovative teacher and as a noninnovative teacher to determine the resistance of CAQ-factor scores to faking.

4. Administration of the CAQ, Form S, to a population of school principals while the investigator is concurrently measuring the relative innovativeness of the schools they administer. To investigate the relationships between administrator attitudes and values and the innovativeness of their schools, CAQ, Form S, factor scores of principals would be used as predictors of their school's innovativeness.

5. Random assignment of teacher trainees to two teacher-training programs that are identical except that one program deals with the issues raised by Factors I, N, S, O, Q, 10, and 11, and the other program does not. Later follow-up measures of teacher innovativeness would be taken and comparisons made to determine program effects on teacher innovativeness. This type of experiment might yield evidence concerning teacher innovativeness as an effect produced by the attitudes and values measured by the indicated factors.

TABLE A-1

PERSONAL TRAITS OF EARLY VERSUS LATER ADOPTERS SYNTHESIZED FROM A REVIEW OF 1,084 RESEARCH STUDIES[a]

Traits of Earlier Adopters	Supportive Studies	Nonsupportive Studies
1. Greater empathy	9	3
2. Less dogmatic	17	19
3. Greater ability to deal with abstractions	5	2
4. Greater rationality	11	3
5. Greater intelligence	5	0
6. More favorable attitude toward change	43	14
7. More favorable attitude toward risk	27	10
8. More favorable attitude toward education	25	6
9. More favorable attitude toward science	20	7
10. Less fatalistic	14	3
11. Higher levels of achievement motivation	14	3
12. Higher occupational aspirations	29	10
13. More cosmopolite	132	42
14. No different from later adopters in age	108[b]	
15. More years of education	203	72
16. Higher social status	275	127
17. Greater degree of upward social mobility	5	0
18. More social participation	109	40
19. More highly integrated with the social system	6	3
20. Greater exposure to mass media communication channels	80	36
21. Greater exposure to interpersonal communication channels	46	14
22. Seek information about innovations more frequently	12	2
23. Greater knowledge of innovations	61	19
24. Higher degree of opinion leadership	42	13

[a]Source: Everett M. Rogers and F. Floyd Shoemaker, Communication of Innovations: A Cross Cultural Approach (New York: The Free Press, 1970), pp. 352-376.

[b]One hundred and eight studies show no relationship; forty-four studies show that early adopters are younger; and seventy-six studies show that early adopters are older.

TABLE B-1
PERSONAL TRAITS OF MORE-INNOVATIVE VERSUS LESS-INNOVATIVE TEACHERS
SYNTHESIZED FROM STUDIES USING THE TEACHER AS RESPONDENT

Traits of the More-Innovative Teacher	Supportive Studies	Nonsupportive Studies	Investigators
1. More open belief systems (less dogmatic)	6	3	Bamberger, 1970; Chambliss, 1969; Childs, 1965; Kerelejza, 1968; Mechling, 1970; Peck, 1969; Russell, 1972; Walsh, 1972
2. More cosmopolite	9	1	Dohmann, 1970; Galler, 1971; Gendron, 1971; Knauer, 1971; Peterman, 1967; Renard, 1953; Russell, 1972; Wiley, 1965
3. Less conservative	3	0	Jenkins, 1967; Leas, 1965; Russell, 1972
4. More job satisfaction	3	1	Corl, 1970; Forman, 1971; LaMantia, 1970; Zimmerman, 1971
5. More creative	4	0	Corl, 1970; Jenkins, 1967; Overstreet, 1971; Zimmerman, 1971
6. Greater knowledge of the principles of "good" educational practices and new developments	3	0	Chambliss, 1969; Galler, 1971; Jenkins, 1967
7. More favorable attitudes toward change	4	0	Bell, 1961; Leas, 1965; Parker, 1971; Russell, 1972
8. More adventurous	3	0	Galler, 1971; Jenkins, 1967; Zimmerman, 1971
9. Perceive themselves as more involved in decision-making	3	0	Corl, 1970; Peck, 1969; Mainberg, 1970
10. Innovativeness is unrelated to sex membership	6	1	Beckerman, 1972; Dohmann, 1970; Galler, 1971; Perez, 1969; Walsh, 1972; Wygal, 1967; Zimmerman, 1971
11. Innovativeness is unrelated to grade level they are teaching	2	2	Bell, 1961; Galler, 1971; Roland, 1972; Wiley, 1965

TABLE B-1, continued:

Traits of the More-Innovative Teacher	Supportive Studies	Nonsupportive Studies	Investigators
12. More external frame of reference	0	2	Forman, 1971; Russell, 1972
13. Perceive that their communities are more supportive of innovations	2	0	Corl, 1970; Dohmann, 1970
14. Exert more opinion leadership	1	2	Galler 1971; Mechling, 1970; Zimmerman, 1971
15. More pragmatic or experimentalistic	2	0	Corl, 1970; McDonell, 1968
16. More flexible	2	0	Jenkins, 1967; Leas, 1965
17. More highly educated	7	4	Beckerman, 1972; Bell, 1961; Eibler, 1966; Galler, 1971; Gendron, 1971; Leas, 1965; Perez, 1959; Wiley, 1965; Wygal, 1967; Zimmerman, 1971
18. Keep their training more above the minimum for certification	2	0	Bell, 1961; Wiley, 1965
19. More recent college training	2	0	Terril, 1969; Wiley 1965
20. More dominant	1	1	Bell, 1961; Jenkins, 1967
21. More complex	1	1	Forman, 1971; Jenkins, 1967
22. Tend to be younger	9	7	Beckerman, 1972; Chambliss, 1969; Dohmann, 1970; Eibler, 1966; Galler, 1971; Kirkton, 1972; Leas, 1965; Marcum, 1969; Mininberg, 1970; Renard, 1953; Roland, 1972; Terril, 1969; Walsh, 1972; Wiley, 1965; Wygal, 1967; Zimmerman, 1971

TABLE B-1, continued:

Traits of the More-Innovative Teacher	Supportive Studies	Nonsupportive Studies	Investigators
23. Tend to be less experienced	11	8	Beckerman, 1972; Bell, 1961; Dohmann, 1970; Eibler, 1966; Fawley, 1961; Galler, 1971; Gendron, 1971; Kerelejza, 1968; Kirkton, 1972; Lees, 1965; Marcum, 1969; Miniberg, 1970; Perez, 1959; Renard, 1953; Terril, 1969; Walsh, 1972; Wiley, 1965; Wygal, 1967

TABLE C-1

PERSONAL TRAITS OF MORE-INNOVATIVE VERSUS LESS-INNOVATIVE TEACHERS: FINDINGS SUPPORTED BY SINGLE STUDIES USING THE TEACHER AS RESPONDENT

	Personal Traits	Investigator
1.	Less authoritarian	Perez, 1959
2.	More secure	Bishop, 1971
3.	Greater participation in in-service training programs outside their schools	Peterman, 1967
4.	More disorderly (personality measure)	Jenkins, 1967
5.	Greater intelligence	Jenkins, 1967
6.	Greater ego strength	Jenkins, 1967
7.	More tolerant of ambiguities	Chambliss, 1969
8.	Greater need for achievement	Bell, 1961
9.	Greater endurance	Bell, 1961
10.	Greater needs for affiliation	Bell, 1961
11.	More heterosexually oriented	Bell, 1961
12.	More custodial in pupil control ideology	Forman, 1971
13.	Personality characteristics of innovators, early majority, late majority, and laggards as groups are different from each other	Mahbubani, 1972
14.	More likely to have male offspring under eighteen	Roland, 1972
15.	More likely to have had less than three years work experience outside education	Roland, 1972
16.	More likely to have remained away from college for at least one year	Roland, 1972
17.	More cognitively abstract	Forman, 1971
18.	More concerned with clarifying the aims of education, whereas the less innovative teachers are more concerned with changing the methods of instruction	Leas, 1965
19.	Teachers of English, special education, and social studies are more open to change than teachers of driver training, boys' physical education, and art	Dohmann, 1970
20.	Perceive that their principals are more supportive of innovations	Dohmann, 1970
21.	More assertive	Zimmerman, 1971
22.	Less tense	Zimmerman, 1971
23.	Greater sense of power	Peck, 1969

TABLE C-1, continued:

Personal Traits	Investigator
24. Perceive of themselves as leaders more often	Leas, 1965
25. Perceive of themselves as liberals	Leas, 1965
26. A teacher may be very innovative in some aspects of his teaching and quite traditional in others	Leas, 1965
27. See themselves as deviant from the innovativeness norms of their social system	Wygal, 1967
28. More positive relationships with parents	Terril, 1969
29. More positive relationships with students	Terril, 1969
30. More positive relationships with administrators	Terril, 1969
31. More positive relationships with other teachers	Terril, 1969
32. Perceive their students to be more creative	Corl, 1970
33. Higher grade point averages in their major	Corl, 1970
34. See themselves closer to the locus of responsibility for decision-making	Mininberg, 1970

APPENDIX D

TEACHER DESIGNATION FORM

Your Teacher Number _____ Date _____

Name of School _____

DIRECTIONS

This designation form has no bearing on anything except this one statistical study. There will be no attempt made to match teacher numbers with actual identities at a later time.

The purpose of this form is to identify individuals in this school who have reputations as innovative teachers. On the preceding page is a numbered list of all the teachers in this school. When you designate a teacher in response to these questions, please use the teacher's number, not his or her name.

You are asked to designate three teachers (by number) in response to each question. These three numbers do not indicate a first, second, or third choice--only three individuals. The order in which you list the teacher numbers is immaterial. You may identify any given teacher more than one time, but no more than one time for any given question. You may nominate yourself.

* * *

1. Which three teachers in this school do you think would be the first to utilize new instructional practices?

   A) _____ B) _____ C) _____

2. Which three teachers in this school would you be likely to check with for advice on a teaching problem?

   A) _____ B) _____ C) _____

3. Which three teachers in this school do you consider to be the most knowledgeable about new, current issues and trends in education?

   A) _____ B) _____ C) _____

4. Which three teachers in this school do you think are using the most creative and the most varied instructional activities?

   A) _____ B) _____ C) _____

TABLE E-1

SUMMARY OF STEPWISE LINEAR REGRESSION ANALYSIS USING CAQ VARIABLES AS PREDICTORS OF ELEMENTARY SCHOOL INNOVATIVENESS

n = 25

Step Number	Variable		Sign of Coeff.	Multiple		F-Ratio for the Model	Number of Indep. Var. in Model
	Entered	Removed		R	R^2		
1	EqEd		+	0.43	0.18	5.07*	1
2	MFlex		−	0.48	0.23	3.34**	2
3	MFlex x LwOr		−	0.51	0.26	2.45	3
4	MFlex x LwOr x EqEd		−	0.53	0.28	1.93	4
5	LwOr x EqEd		+	0.54	0.29	1.58	5
6	LwOr		+	0.55	0.30	1.24	6
7	MFlex x LwOr		+	0.55	0.30	1.04	7

*H_o rejected at 0.05 level.

**H_o rejected at 0.10 level.

TABLE E-2

SUMMARY OF STEPWISE LINEAR REGRESSION ANALYSIS USING CAQ VARIABLES AS PREDICTORS OF POSTELEMENTARY SCHOOL INNOVATIVENESS

n = 23

Step Number	Variable		Sign of Coeff.	Multiple		F-Ratio for the Model	Number of Indep. Var. in Model
	Entered	Removed		R	R^2		
1	EdCon		−	0.42	0.18	4.83*	1
2	Pms		+	0.52	0.27	3.81*	2
3	TDsAut		−	0.56	0.31	3.02**	3
4	AcEt		+	0.60	0.36	2.71	4
5	Pms x TDsAut		+	0.64	0.42	2.53	5
6	AcEt x TDsAut		+	0.65	0.43	2.07	6
7	EdCon x Pms x TDsAut		+	0.66	0.44	1.72	7
8	LwOr		−	0.66	0.44	1.48	8
9		Pms		0.66	0.44	1.80	7
10	EdCon x Pms		+	0.66	0.44	1.48	8

*H_o rejected at 0.05 level.

**H_o rejected at 0.10 level.

TABLE E-3

SUMMARY OF STEPWISE DISCRIMINANT FUNCTION ANALYSIS USING CAQ VARIABLES TO PREDICT MEMBERSHIP IN MOST- OR LEAST-INNOVATIVE TEACHER GROUPS

n = 24

Step Number	Variable Entered	Variable Removed	Relation to Inno.	Overall F-Ratio	U-Statistic	Accuracy of Classification	Number of Var. in Function
1	EdCon		–	5.99*	0.79	75%	1
2	RdCh		–	4.19*	0.71	79.2%	2
3	TDsAut		–	3.50*	0.66	83.3%	3
4	LwOr		+	3.07*	0.61	87.5%	4
5	Pms		+	3.49*	0.51	83.3%	5
6	RgInd		+	3.09*	0.48	83.3%	6
7	AcEt		–	2.82*	0.45	83.3%	7
8	Pur		–	2.47	0.43	83.3%	8
9	Bgt		–	2.19	0.42	83.3%	9
10	MFlex		–	1.90	0.41	87.5%	10
11	CurSoc		–	1.66	0.40	87.5%	11
12	EqEd		–	1.41	0.39	87.5%	12
13	EdProg		+	1.18	0.39	87.5%	13

*H_o rejected at 0.05 level.

TABLE E-4

SUMMARY OF STEPWISE DISCRIMINANT-FUNCTION ANALYSIS USING CAQ VARIABLES TO PREDICT SCHOOL FACULTY MEMBERSHIP
n = 48

Step Number	Variable Entered	Variable Removed	Relation to Inno.	Overall F-Ratio	U-Statistic	Accuracy of Classification	Number of Var. in Function
1	RdCh		−	4.85*	0.90	58.4%	1
2	CurSoc		−	6.24*	0.78	68.8%	2
3	AcEt		+	5.35*	0.73	66.7%	3
4	Pms		+	4.43*	0.71	75.0%	4
5	MFlex		−	3.91*	0.68	72.9%	5
6	EdCon		−	3.42*	0.67	72.9%	6
7	EdProg		+	3.02*	0.65	75.0%	7
8	EqEd		+	2.68*	0.65	70.8%	8
9	TDsAut		+	2.42*	0.64	75.0%	9
10	Bgt		−	2.15*	0.63	75.0%	10
11	LwOr		−	1.90	0.63	72.9%	11
12	Pur		−	1.70	0.63	72.9%	12
13	RgInd		+	1.52	0.63	75.0%	13

*H_o rejected at 0.05 level.